



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q68480

Hidemitsu AOKI, et al.

Appln. No.: 10/071,184

Group Art Unit: 2812

Confirmation No.: 2961

Examiner: Unknown

Filed: February 11, 2002

For: MANUFACTURING METHOD OF SEMICONDUCTOR DEVICE

**INFORMATION DISCLOSURE STATEMENT
UNDER 37 C.F.R. §§ 1.97 and 1.98**

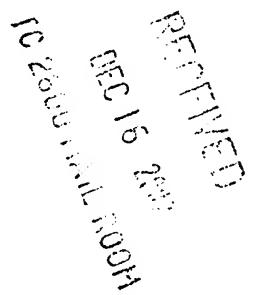
Commissioner for Patents
Washington, D.C. 20231

Sir:

In accordance with the duty of disclosure under 37 C.F.R. § 1.56, Applicant hereby notifies the U.S. Patent and Trademark Office of the documents which are listed on the attached PTO/SB/08 A & B (modified) form and/or listed herein and which the Examiner may deem material to patentability of the claims of the above-identified application.

1. U.S. Patent No. 6,136,680 issued October 24, 2000 to Lai et al.
2. U.S. Patent No. 6,165,894 issued December 26, 2000 to Pramanick et al.
3. U.S. Patent No. 6,174,810 B1 issued January 16, 2001 to Islam et al.
4. U.S. Patent No. 5,447,887 issued September 5, 1995 to Filipiak et al.
5. J. NOGUCHI et al., "TDDB Improvement in Cu Metallization under Bias Stress", *IEEE, 38th Annual International Reliability Physics Symposium*, San Jose, California, 2000, pp. 339-343.

One copy of each of the listed documents is submitted herewith, along with a copy of the corresponding Communication from a Foreign Patent Office.

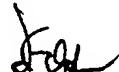


AOKI et al.
Appln. No. 10/071,184
Information Disclosure Statement

The present Information Disclosure Statement is being filed: (1) No later than three months from the application's filing date for an application other than a continued prosecution application (CPA) under §1.53(d); (2) Before the mailing date of the first Office Action on the merits (whichever is later); or (3) Before the mailing date of the first Office Action after filing a request for continued examination (RCE) under §1.114, and therefore, no Statement under 37 C.F.R. § 1.97(e) or fee under 37 C.F.R. § 1.17(p) is required.

The submission of the listed documents is not intended as an admission that any such document constitutes prior art against the claims of the present application. Applicant does not waive any right to take any action that would be appropriate to antedate or otherwise remove any listed document as a competent reference against the claims of the present application.

Respectfully submitted,



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WASHINGTON OFFICE



23373

PATENT TRADEMARK OFFICE

Date: December 13, 2002

Substitute for Form 1449 A & B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>		<i>Complete if Known</i>	
1 3 2002 <i>TRADEMARK OFFICE</i>		Application Number	10/071,184
		Confirmation Number	2961
		Filing Date	February 11, 2002
		First Named Inventor	Hidemitsu AOKI
		Art Unit	2812
		Examiner Name	Unknown
		Attorney Docket Number	Q68480

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		Number	Kind Code ² (if known)		
		US 6,136,680	A	10-24-2000	Lai et al.
		US 6,165,894	A	12-26-2000	Pramanick et al.
		US 6,174,810	B1	01-16-2001	Islam et al.
		US 5,447,887	A	09-05-1995	Filipiak et al.
		US			

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city, and/or country where published.	Translation ⁶
		5. J. NOGUCHI et al., "TDDB Improvement in Cu Metallization under Bias Stress", <i>IEEE</i> , 38th Annual International Reliability Physics Symposium, San Jose, California, 2000, pp. 339-343	

Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²See Kind Codes of USPTO Patent Documents at www.uspto.gov. MPEP 901.04 or in the comment box of this document. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST. 3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to indicate here if English language Translation is attached.



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WC1X 8PL

Your Reference: RCA/44201
Application No: GB 0203784.4

24 September 2002

The Patent Office
Patents Directorate

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Dear Sirs

Patents Act 1977: Search Report under Section 17(5)

I enclose two copies of my search report and three copies of the citations.

Publication

I estimate that, provided you have met all formal requirements, preparations for publication of your application will be completed soon after **22 October 2002**. You will then receive a letter informing you of completion and telling you the publication number and date of publication.

Amendment/withdrawal

If you wish to file amended claims for inclusion with the published application, or to withdraw the application to prevent publication, you must do so before the preparations for publication are completed. **No reminder will be issued.** If you write to the Office less than 3 weeks before the above completion date, please mark your letter prominently: **"URGENT - PUBLICATION IMMINENT".**

Yours faithfully

Stephen Jennings
Examiner

[†]**Use of E-mail:** Please note that e-mail should be used for correspondence only.



Application No: GB 0203784.4
Claims searched: 1-10

Examiner: Stephen Jennings
Date of search: 23 September 2002

Patents Act 1977 Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.T): H1K (KHAC)

Int Cl (Ed.7): H01L 21/768, 23/532

Other: Online: WPI, EPODOC, PAJ

Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
X	US 6136680 (Taiwan Semiconductor Manufacturing Company) See column 6 lines 59-61, column 8 lines 62-65, column 9 lines 7-11	1,3,7-8,10
A	US 6165894 (Advanced Micro Devices)	
A	US 6174810 B1 (Motorola Inc)	
A	US 5447887 (Motorola Inc)	
X	TDDB Improvement in Cu Metallization under Bias Stress, Noguchi et al, IEEE 38 th Annual International Reliability Physics Symposium, San Jose, California, 2000, pp 339-343	7-8,10

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.